

data to mixed populations such as in the United States. However, the large cohort size and long observation period are key strengths of this longitudinal study, the results of which provide insight into the natural history of this chronically relapsing and remitting disease.

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Edwin Kim, MD
A. Wesley Burks, MD
Durham, NC

Correlation Between Serum 25-Hydroxyvitamin D Levels and Severity of Atopic Dermatitis in Children

Peroni DG, Piacentini GL, Cametti E, Chinellato I, Boner AL. *Br J Dermatol*. 2011;164(5):1078-1082

PURPOSE OF THE STUDY. To determine if low levels of vitamin D correlate with the severity of atopic dermatitis (AD).

STUDY POPULATION. Thirty-seven children (20 boys and 17 girls) with AD, between the ages of 8 months and 12 years, were evaluated in an outpatient clinic in Verona, Italy.

METHODS. The Severity Scoring of Atopic Dermatitis (SCORAD) index was used to determine the severity of AD in these children. Serum 25-hydroxyvitamin D (25[OH]D) levels were determined by using a chemiluminescent method. Values were used as a continuous variable, and vitamin D amounts were also categorized, in a descriptive analysis, as sufficient ($\geq 30-40$ ng/mL), insufficient (20-30 ng/mL), or deficient (< 20 ng/mL). The ImmunoCAP test (Phadia, Uppsala, Sweden) was used to assay for specific immunoglobulin E (sIgE) to *Staphylococcus aureus* enterotoxins and to *Malassezia furfur*. Skin-prick testing was performed for common environmental and food allergens, and mean diameters were added together to create a total allergy score.

RESULTS. Using the SCORAD index, subjects were classified as having severe (9 of 37), moderate (13 of 37), or mild (15 of 37) AD. Mean serum 25(OH)D levels were found to be significantly higher in patients with mild AD (36.9 ± 15.7 ng/mL) compared with those with moderate (27.5 ± 8.3 ng/mL) or severe AD (20.5 ± 5.9 ng/mL). Although not statistically significant, the prevalence of patients with sIgE to microbial antigens increased with the severity of AD and the presence of vitamin D deficiency. There was no significant difference in the total allergy scores between those with mild, moderate, and severe AD.

CONCLUSIONS. Vitamin D deficiency might be related to the severity of AD.

REVIEWER COMMENTS. These results support the idea that vitamin D deficiency might be related to the severity of

AD and adds to the current body of epidemiologic studies. The study also reinforces that studies that evaluate treatment of vitamin D deficiency and treatment with vitamin D for the management of AD are needed.

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Michael Pistiner, MD, MMSc
Boston, MA

Infant Eczema, Infant Sleeping Problems, and Mental Health at 10 Years of Age: The Prospective Birth Cohort Study LISApplus

Schmitt J, Chen CM, Apfelbacher C, et al; LISA-plus Study Group. *Allergy*. 2011;66(3):404-411

PURPOSE OF THE STUDY. This study investigated the relationship between infant eczema, infant sleeping problems, and the risk of mental health problems at 10 years of age.

STUDY POPULATION. Included were newborns ($N = 1578$) recruited as a birth cohort between 1997 and 1999 from 4 German maternity hospitals.

METHODS. Participants were followed regularly from birth until 10 years of age. Parental questionnaires were used to gather information regarding physician-diagnosed eczema, parent-reported sleeping problems secondary to pruritus, and known environmental risk factors for atopy. Mental health at 10 years of age was measured by using the validated German Strengths and Difficulties Questionnaire to determine possible/probable versus unlikely mental health problems. Multivariate logistic regression analyses adjusted for environmental and lifestyle factors (exclusive breastfeeding, single parents, and day care attendance), allergic comorbidity, and family history of eczema. Participants with infant eczema with sleep problems or sleep problems caused by pruritus were compared to children with no reported sleep problems and no eczema (reference group).

RESULTS. Of the 1578 participants eligible for analysis at the age of 10 years, 266 had infant eczema (first 2 years of life), 92 had parent-reported sleep problems caused by pruritus, 54 had infant eczema with sleep problems, 385 had ever been diagnosed with eczema, and 1162 never had eczema or sleeping problems (reference group). Children with eczema and/or sleeping problems did not differ significantly in regards to gender, study site, or breastfeeding status compared with those in the reference group. When adjusted for environmental exposures, demographic confounders, and comorbid atopic airway disease, children with infant eczema were at increased risk of hyperactivity/inattention at 10 years of age (odds ratio [OR]: 1.78 [95% confidence interval (95% CI): 1.02-3.09]). Infant eczema with concurrent sleeping problems was related to emotional problems (OR: 2.63 [95% CI: 1.20-5.76]) and conduct problems (OR: 3.03

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